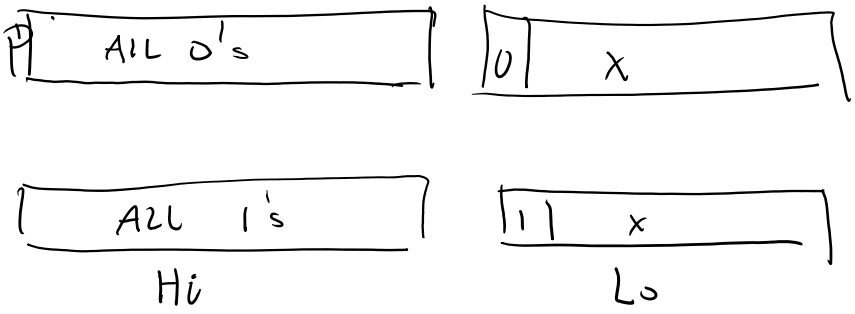
Lecture 7 - MIPS Assembly Language Exercise

Tuesday, February 11, 2020 11:20 AM

Objectives:	- Learn how control structures are implemented in MIPS assembly language - Practice going from pseudocode to MIPS assemble Language

SIGNED MULTIPLY



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POSITIVE PRODUCT W/NO OVERFLOW

NEG

PRACTICE SHEET

a) $t3 = t4 + t5 - t6$

```
add $t3, $t4, $t5
sub $t3, $t3, $t6
```

b) $S3 = t2 / (S1 - 4321)$

```
addi $S3, $S1, -4321
div $t2, $S3
mflo $S3
```

c) $sp = sp - 16$

```
addi $sp, $sp, -16
```

d) a0 = &array

```
la $a0, array
```

e) t8 = Mem(a0)

```
lw $t8, 0($a0)
```

f) Mem(a0+16) = 32768

```
addiu $t0, $zero, 32768
sw $t0, 16($a0)
```

g) if(t0 < 0) then t7 = 0-t0 else t7 = t0;

```
bgez $t0,
nop
sub $t7, $zero, $t0
b done
nop
ELSE:
add $t7, $zero, $t0
DONE:
```